# Dr. Eva C. Herbst

## Postdoctoral Fellow in Shoulder Biomechanics


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**Github** - **GoogleScholar** - **Figshare** - **Publons** - **Orcid**


## Education

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|---|---|
| Oct 2016 - Apr 2020 | PhD in Biomechanics and Palaeontology<br>*Advisor: John Hutchinson, Structure & Motion Lab, Royal Veterinary College, London* |
| Aug 2012 - May 2016 | B.A. in Integrative Biology<br>*U.C. Berkeley* |
| Oct 2013 - Jun 2014 | Degree of Higher Education in Biomedical Sciences<br>*Durham University*, Year of Study Abroad, Certificate of Higher Education |

## Employment & Research Experience

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|---|---|
| Mar 2023 - present | Postdoctoral Fellow: Computational Shoulder Biomechanics<br>*ETH & Schulthess Clinic, Zurich* |
| Dec 2019 - Nov 2022 | Postdoctoral Researcher: Skull Biomechanics of Triassic Reptiles<br>*Palaeontological Institute & Museum, University of Zurich* |
| Oct 2019 - Dec 2019 | OATech+ Network Early Career Researcher Placement: Knee Osteoarthritis<br>*Skeletal Biology Group, Royal Veterinary College London* |
| May 2013 - Jul 2016 | Undergraduate Research Assistant: Anatomy and Biomechanics Projects<br>*U.C. Berkeley & University of Missouri* |

## Peer-Reviewed Publications

12 papers, 8 of which are first author publications. Please see a full list of publications here.

## Honors & Awards

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|---|---|
| 2021 | **D. Dwight Davis Award, Society of Integrative and Comparative Morphology**<br>Best student oral presentation in the Division of Vertebrate Morphology |
| 2020 | **Swiss Commission of Palaeontology Prize**<br>Best presentation in palaeontology given at the Swiss Geoscience Meeting |
| 2016 | **Franklin M. Henry Award, Integrative Biology, UC Berkeley**<br>Outstanding achievement in human performance and health research |
| 2016 | **Distinction in General Scholarship, UC Berkeley**<br>Awarded to graduates achieving high grade point average |
| 2013, 2015 | **Dean's Honors, UC Berkeley**<br>Awarded to graduates achieving high grade point average |

## Grants & Funding

2024 | **Gesellschaft für Arthroskopie und Gelenkchirugie** — 10,000 EUR
Grant for establishing a clinical imaging database of shoulder instability patients

2024 | **Hamlyn Symposium for Medical Robotics Accepted Workshop Proposal** — 2,500 GBP
Organisation of Workshop: Open-Source Software for Surgical Technologies, London, June 2024

2023 | **Digital Switzerland Boost Programme** — 420 CHF
Grant for attending Advanced 3D Slicer Programming Course

2021 | **ImagingBioPro Network Online Educational Material Grant** — 1,000 GBP
Development of educational materials and code: mesh manipulation and trabecular segmentation

2020 | **University of Zurich GRC Grant** — 10,000 CHF
Organization of finite element analysis conference and workshop with over 200 participants, development of website and Github organisation for sharing finite element modeling methods

2019 | **OATech+ Network Biomechanics and Mechanobiology Pump Priming Fund** — 10,000 GBP
Research project 3D trabecular architecture as a biomarker to identify and monitor knee osteoarthritis

2019 | **OATech+ Network Early Career Researcher Placement** — 3,000 GBP
Placement with Prof Andrew Pitsillides at RVC to work on osteoarthritis project (see above)

2018<br>2019 | **Royal Veterinary College Foreign Travel Fund** — 600 GBP
300 GPB each to present research at ICVM and SICB conferences

2016 | **Research Experience for Undergraduates, National Science Foundation** — 3,500 USD
Biomechanics research internship, University of Missouri

## Conference Presentations, Invited Talks & Workshops, Teaching

Please see a full list of my presentations, invited talks, workshops, and teaching here.

## Supervision

- **Jan Heres**, Master's Thesis: Reconstruction of a patient-specific model of the humerus bone. University of West Bohemia (acting as external supervisor). *Ongoing*.
- **Dennis Agbanyim**, Master's Thesis: Scapular Bone Density Calibration, ETH Zurich (2024)
- **Flavia Stettler**, Master's Semester Project: Humeral Translations, ETH Zurich (2024)
- **Dylan Bastiaans**, PhD Thesis: Digital Palaontology and Biomechanics, UZH (2019-2023)
- **Kehan Pan**, Master's Semester Project: Skull FEA, ETH Zurich (2022)

## Open-Source Work

I have developed several open-source programs, which are available on my website.